

PHASE I BOOK EXPLOITATION:

SOV/5289

Akademiya nauk SSSR. Tsentral'naya nauchno-issledovatel'skaya laboratoriya elektricheskoy obrabotki materialov.

Elektroiskrovaya obrabotka metallov (Electric-Spark Machining of Metals) no. 2. Moscow, Izd-vo AN SSSR, 1950. 262 p. Errata slip inserted. (Series: Its: Trudy) 6,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR.

Resp. Ed.: B. R. Lazarenko; Ed. of Publishing House: S. M. Mozhzhes; Tech. Ed.: A. P. Guseva.

PURPOSE: This collection of articles is intended for process engineers, and technical and research personnel engaged in the working of metals.

COVERAGE: Problems concerning the most effective application of electric-spark methods in industry are reviewed. Possible future developments in the field of electric-spark machining and its automation are discussed, and, for instance of its present utilization in industry, the technical-economic effectiveness of the process is examined, and the equipment involved is described. The relationship between the parameters of (pro-) electric-spark pulses and the production characteristics of electric-spark machining is established. An electric-spark method is advanced for the curvilinear cutting of materials with a 20 to 30 micron-thick wire, thus directly producing a finished part. Non-Soviet developments in the field of electric-spark machining are also treated. No personalities are mentioned. There are 121 references: 82 Soviet, 20 English, 10 French, 8 German, and 1 Italian. These references accompany individual articles.

Zolotych, B. N., and I. P. Korobova. Selecting Optimum Regimes for Electric-Spark Machining of Sintered-Carbide Alloys 114

Ghetverikov, S. S., and N. K. Poteyev. Electric-Spark Machining of the Cutting Elements of High-Carbon-Alloy Blanking Punch-Die Sets 120

Gularyan, K. K. The Electric-Spark Method Applied to Threading 142

Kholodnov, Ye. V. Manufacture of Precision Tools by the Electric-Spark Method 156

Gularyan, K. K., and V. L. Kravchenko. Manufacture of Complex-Shaped Machine Parts by Using a Program-Controlled Electric-Spark Machining Unit 179

Aleksandrov, V. P., and B. N. Zolotych. Selecting the Optimum Procedures for Electric-Spark Machining of Nickel-Base Heat-Resistant Alloys 196

Gorbunov, B. M. Electric-Spark Lapping Used on Flour-Mill Nells 205

Prut'ko, G. P. Manufacture of Stainless and High-Manganese Steel Parts by the Electric-Spark Method 217

Arsenshtok, V. L., and S. I. Komnary. Electric-Spark Machining of Mass-Produced Parts 227

Levinson, Ye. M. The Development of Electric-Spark Machining in Mass Production 233

Card 4/5

17

35905

S/123/52/000/004/004/014

AC04/A101

1.1110

AUTHOR: Gularyan, K. K.

TITLE: Electrosark method of threading

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 4, 1962, 27, abstract  
4B148 ("Tr. Tsentr. n.-i. labor. elektr. obrabotki materialov.  
AN SSSR", 1960, no. 2, 142 - 155)

TEXT: The method of electrosark threading by direct copying is effected with a working electrode in the form of a "tap" from copper, brass or cast iron with circular or axial feed. The high hydraulic resistance of removing the erosion products by this method results in a low efficiency of the electrosark threading method. This deficiency is eliminated by the developed electrosark threading method using a multiple-thread (comb-shaped) electrode. The cutting of internal threads is effected with an electrode which represents a cylinder with annular thread of the required profile which is located in parallel with the component axis. The electrode diameter is less than the diameter of the thread being cut. The electrode rotates at a high speed and is given an infeed which is perpendicular to the component axis. To generate a full thread turn, the com-

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Electrospark method of threading

S/123/62/000/004/004/014  
A004/A101

ponent is given an axial and circular helical feed. Two control variants are possible: The working electrode is fed to the profile depth and the helical feed of the component is controlled, or the infeed is controlled at a constant helical component feed. The author describes the functional diagram of the electrospark threading of cylindrical and tapered threads using multiple-thread electrodes. A considerable increase in efficiency with this method is attained owing to the presence of a channel between the electrode and the component and by utilizing the electrode motion to eject the erosion products into the discharge channel. The author analyzes problems of electrospark threading with the aid of the described method, and presents analytical and graphic methods permitting the selection of optimum electrode dimensions in correspondence with the required accuracy or the estimate of the accuracy of the surface obtained by the given thread and tool parameters. There are 15 figures and 8 references.

A. Kruglov

[Abstracter's note: Complete translation]

Card 2/2

ACC NR: AP6026319 (A, N) SOURCE CODE: UR/0407/65/000/003/0027/0044

AUTHOR: Gularyan, K. K. (Moscow)

ORG: none

TITLE: Synthesizing automatic contour-tracking devices in electrospark machining of metals

SOURCE: Elektronnaya obrabotka materialov, no. 3, 1965, 27-44

TOPIC TAGS: electrospark machining, automatic control, industrial automation

ABSTRACT: Formulas underlying the possible design of electrospark duplicators are discussed. Two methods of automatic duplication — electro and photo (see Fig. 1) — can be used. In the electroduplicating method, the wire electrode also serves as a feeler (or probe) that follows the required contour; the template is mounted on an insulator. In the photoduplicating method, the contour is followed by a photo-multiplier-operating light beam. It is suggested that switching be made at points where the tangent-slope angle exceeds  $45^\circ$  and where the contour makes sharp turns. The method of digital automata is used in synthesizing a system for automatic tracking

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ACC NR. AP6026319

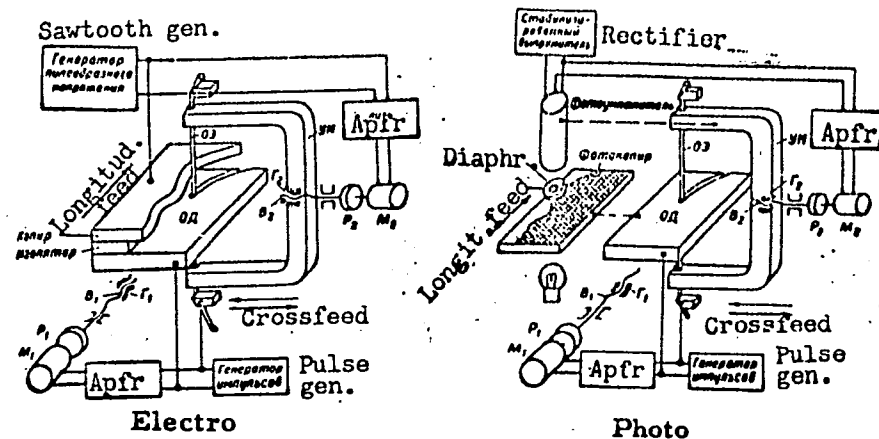
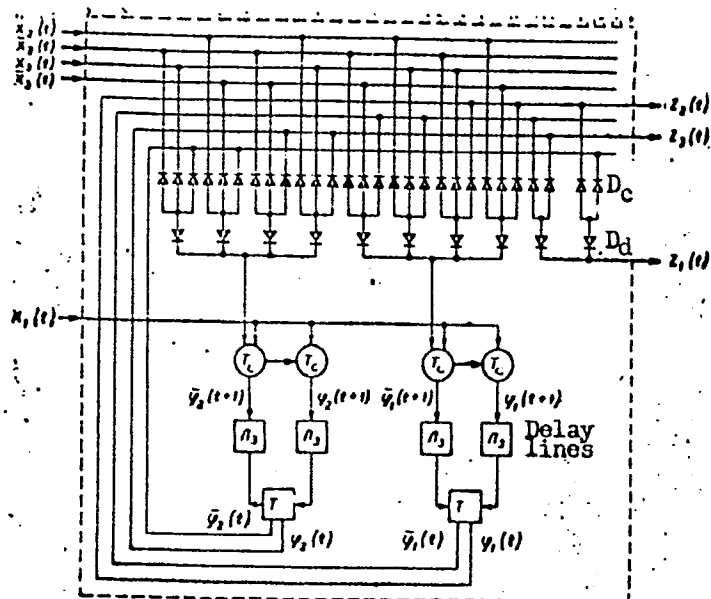


Fig. 1 - Methods of duplicating electrospark machining

logic diagram:  $D_c$  - diode-type conjunction circuit;  $D_d$  - diode-type disjunction circuit;  $T_c$  - two-control-grid electron-tube conjunction circuit;  $T$  - trigger. The difficulty of following acute angles can be overcome by providing a programming system with an external storage, such as a punch tape. Further, the limitation of monotonous

contours that have monotonous variation of tangent-slope angle; a probabilistic switching scheme, a signal graph, and a table of operators realized by such automata are developed. A logic diagram (see Fig. 2) is synthesized which may eventually serve for developing a technical system. In this

ACC NR: AP6026319



angle variation is lifted, and relations, a logic diagram, and an algorithm are developed for a system capable of tracking any configuration of templet. Orig. art. has: 12 figures, 55 formulas, and 3 tables.

SUB CODE: 13, 09

SUBM DATE: none

ORIG REF: 009 / OTH REF: 001

Fig. 2 - Logic diagram of a monotonous-angle contour-tracking system

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1.1110

32669

S/196/61/000/012/027/029

E194/E155

AUTHORS: Gularyan, K.K., and Kravchenko, V.L.

TITLE: Making parts of complicated outline by electric-spark machining with programme control

PERIODICAL: Referativnyy zhurnal, Elektrotehnika i energetika, no.12, 1961, 41, abstract 12K 238. (Tr. Tsentr. n.-i. labor. elektr. obrabotki materialov. AN SSSR, no.2, 1960, 179-195)

TEXT: The NII of the Goskomitet Soveta Ministrov po radioelektronike (State Committee of the Council of Ministers on Radioelectronics) has developed a method for electric-spark machining of parts of complicated outline in which the electrode consists of a thin wire 0.02-0.3 mm in diameter. Slots have been made of from 0.025 mm width and up to 70 mm deep and of lengths to suit the shape of the part. Consideration is given to the maintenance of accuracy and surface finish in equipment with programme control. The article gives a description, a schematic circuit diagram, block circuit diagram and external appearance of

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Making parts of complicated outline... S/196/61/000/012/027/029  
E194/E155

equipment type ЭКУП-2 (EKUP-2). Performance data are as follows: maximum power demand 0.4 kVA, smooth current control from 0 to 1 A. Capacitance switched in steps of 0.01 microfarads over the range 0.01 - 0.42 microfarads. The tool electrode is a wire of 0.02-0.1 mm diameter; the output is 2 - 10 mm<sup>3</sup>/min; the surface finish is standard grade 6 - grade 10; the maximum longitudinal travel is 50 mm; the maximum size of part machined is 150 x 50 x 50 mm; the volume of the container of working fluid 2 litres; the maximum weight of part machined 0.5 kg; and overall dimensions of the equipment 840 x 720 x 1100 mm. Information is also given about the use of special electrodes with slots in two mutually perpendicular directions for making precision all-metal grids of copper, nickel, vanadium, molybdenum and other metals with width of metal parts from 0.02 mm upwards.

[Abstractor's note: Complete translation.]

Card 2/2



L 11592-66

EWT(d)/EWT(m)/EWP(v)/EWP(t)/EWP(k)/EWP(h)/EWP(h)/EWP(l)/EWA(h)

JD

ACC NR: AP6000371

SOURCE CODE: UR/0286/65/000/021/0084/0084

AUTHOR: Gularyan, K. K.

ORG: none

TITLE: Electric arc apparatus with programmed control. Class 49, No. 176174

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 21, 1965, 84

TOPIC TAGS: electroerosion machining, metal electroforming

ABSTRACT: This Author Certificate presents an electric arc apparatus with programmed control for fabricating parts having straight outlines parallel to the coordinate axes, and using an unshaped electrode. The apparatus contains combined slave systems for moving two coordinate tables with magnetostrictors fastened to them. To compensate the dynamic errors of the control system and to increase the fabrication accuracy, the part is mounted on one of the magnetostrictors and the electrode is mounted on the other (see Fig. 1). Determination of the actual position of the electrode relative to the part along each coordinate is made by algebraic summation of the digital values of the positions of the coordinate table and the end of the magnetostrictor. To compensate the dynamic errors along the whole outline with small values of displacements of the magnetostrictors' ends and to shift them into the zero positions, slave systems are used to carry out the displacements of the coordinate tables by the magnitudes of the displacements of the ends of the magnetostrictors.

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UDC: 621.9.048.6.06-503.55

L 11592-66

ACC NR: AP6000371

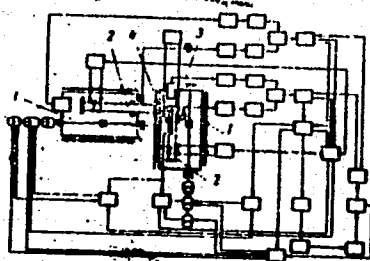


Fig. 1. 1 - Coordinate tables;  
2 - magnetostrictors;  
3 - fabricated part;  
4 - electrode.

Orig. art. has: 1 diagram.

SUB CODE: 13/ SUBM DATE: 10Dec63

Possibly electrospark Machining

18

HW  
Card 2/2

L 21833-66 EWP(k)/EWT(d)/EWT(m)/EWP(h)/ETC(m)-6/T/EWP(l)/EWP(v)/EWP(t) JD  
 ACC NR: AP6004277 SOURCE CODE: UR/0407/65/000/002/0018/0028

AUTHOR: Gularyan, K. K. (Moscow); Gusev, Ye. V. (Moscow) 23

ORG: none 22  
 8

TITLE: Synthesizing a digital program control system for a precision electric-  
 spark-machining outfit 14

SOURCE: Elektronnaya obrabotka materialov, no. 2, 1965, 18-28

TOPIC TAGS: spark machining, program control, digital control

ABSTRACT: As the known systems of metal-working-machine program control are inapplicable to spark-machining outfits and as existing program controls for spark machining permit processing only a narrow class of work-pieces, a new system is suggested which permits spark-machining any shape composed from (under 1-mm) straight-line segments. A position-type feedback which uses recorded absolute values of coordinates is adopted in the new system. A punch tape is quickly (0.03-0.05 sec) fed by a step mechanism and remains at rest during the machining of one step; then it is fed again. Short-time short-circuits are eliminated by a 4-frame

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ACC NR: AP6004277

simultaneous reading of the punch tape; "deep" short-circuits are liquidated by retracting the punch tape. In synthesizing, the logical net is constructed by applying digital-automata techniques to a "black box" with a known input and output. The resulting digital program control permits machining the segmented outlines with an error of  $\pm 3\mu$  and with a surface roughness of  $0.8-0.4\mu$ , and also permits producing any complex outline with an error of  $10-20\mu$  and a surface roughness of  $5-10\mu$ . Minimum electrode diameter,  $5\mu$ ; spark-gap voltage,  $5-10$  v. Advantages claimed: minimum number of components, maximum reliability, no error accumulation. Disadvantages: complicated programing of some outlines. Orig. art. has: 5 figures, 18 formulas, and 2 tables.

SUB CODE: 09, 13 / SUBM DATE: none / ORIG REF: 008

Card 2/2 net

L 13247-66 EWA(j)/T/EWA(b)-2 JK

ACC NR: AP6006042

SOURCE CODE: CZ/0053/65/014/004/0294/0294

AUTHOR: Gulda, O.

ORG: Department of Pharmacology, LF, Brno (Farmakologicka katedra LF) *25 B*

TITLE: Mechanism of effect of staphylotoxin on isolated smooth muscle [This paper was presented during the Twelfth Pharmacologic Days, Smolenice, 29 Jan 65.] *14 155*

SOURCE: Ceskoslovenska fysiologie, v. 14, no. 4, 1965, 294

TOPIC TAGS: rat, experiment animal, myology, toxicology, bacteriology, calcium

ABSTRACT: In vitro studies on rat uterus, coronaries of isolated rabbit heart all confirmed that in smooth muscle preparations also as previously shown in the author's thesis to occur in the striated muscle, the effect of staphylotoxin is very strictly correlated with the calcium ion concentration. *[JPRS]*

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 001 / OTH REF: 002

Card 1/1 *[Signature]*

GULAS, Stefan, Lnz.

Remarks on A. Vanek's article 'Performance and use of machinery  
in the building industry.' In: stavby 13 no.1:Suppl.-mechanizace  
no.1,5-7 '65.

GULAS, Stefan, inz.

Simple and fast programming of the use of heavy building machines.  
Inz stavby 13 no.4: Suppl: Mechanizace no.4: 53-55 '65.

1. Inzinierske stavitelstvo, Branch Management, Bratislava.

GULATI, B.S.; SINGH, P.; PIRKE, P.P.

Germination of the seeds of *Rauwolfia serpentina* Benth. Biul.  
Glav. bot. sada no.56:36-38 '64. (MIRA 18:5)

1. Severnyy zonal'nyy tsentr Tsentral'nogo indiyaskogo instituta  
lekarstvennykh rasteniy, Khaldvani, Indiya.



GULAY, O.G. [Hulai, O.H.], inzh.-mekhanik

Restoring connecting rods by means of welding under flux. Mekh. sel.  
hosp. 9 no.9:12-13 S '58. (MIRA 11:10)  
(Electric welding) (Agricultural machinery--Maintenance and repair)

GULAY, O.G. [Hulai, O.H.], nauchnyy sotrudnik; BUNENKO, I.D., nauchnyy sotrudnik.

Device for grinding valve seats. Mekh.sil'.hosp. 11 no.1:19-20  
Ja '60. (MIRA 13:4)

1. Ukrainskaya akademiya sel'skokhozyaystvennykh nauk.  
(Grinding and polishing)

SIVCHIKOVA, M.G. [Syvchikova, M.H.], kand. tekhn. nauk; DAYN, F.L.;  
GULAY, O.S. [Hulai, O.S.]

Improving the quality of maiolica goods. Leh. prom. no.1:21-22  
Ja-Mr '65. (MIRA 18:4)

GULAY, O.S. [Hulai, O.S.]

Effect of rare-earth element compounds on the whiteness  
and translucency of porcelain. Ish. prom. no.4:17-20  
O-D '65. (MIRA 19:1)

SIVCHIKOVA, M.G. [Syvchykova, M.H.], kand. tekhn. nauk; DAYN, F.L.;  
GULAY, O.S. [Gulai, O.S.]

Effect of the glaze coating on porcelain whiteness. Izv. prom.  
no.4:22-27 O-D '65. (MIFA 19:1)

GULAYA, N. K.

GULAYA, N. K.: "Seasonal changes in the content and biological mass of micro-organisms and the processes of the nitrogen cycle in fish ponds and rice paddies". Alma-Ata, 1955. Inst of Botany, Acad Sci Kazakh SSR. (Dissertations for the degree of Candidate of Biological Sciences.)

SO: Knishnaya Letopis' No. 50 10 December 1955. Moscow.

GULAYA, N.K.

Microbiological characteristics of fish ponds and rice fields of  
the Alma-Ata fish farm. Trudy Inst.mikrobiol.i virus.AN Kazakh.SSR  
1:136-152 '56.  
(ALMA-ATA PROVINCE--FISH PONDS) (RICE) (MLBA 10:6)  
(FRESH-WATER BIOLOGY)

USSR/Microbiology - General Microbiology. Water and Air  
Microorganisms.

F

Abs Jour : Ref Zhur Biol., No 22, 1958, 99349

Author : Gulaya, N.K.

Inst : Institute of Microbiology and Virology.

Title : Application of the Plate Overgrowth Method to the Study  
of the Microflora of Ponds and Rice Paddies.

Orig Pub : Tr. In-ta mikrobiol. i virusol. AN KazSSR, 1958, 2,  
258-264

Abstract : Microbiological investigations of ponds and rice paddies  
of the Alma-Ata Pond Fish Industry were carried out by  
the method of plate overgrowth. A survey of the slides  
demonstrated that the bacterial population of ponds is  
characterized by predominance of rod-shaped, non-sporo-  
genous forms of bacteria. The qualitative composition

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- 47 -

USSR/Microbiology - General Microbiology. Water and Air  
Microorganisms.

Abs Jour : Ref Zhur Biol., No 22, 1958, 99349

of the microflora on the slides from superficial and bot-  
tom layers varied little. During the period of introduc-  
tion of a green vegetable fertilizer an abundant develop-  
ment of most variegated groups of microorganisms was ob-  
served, but nonsporogenous bacilli predominated. The  
qualitative composition of the microflora of rice paddies  
is distinguished by the poverty of forms.

Card 2/2



GULAYA, N.K.

Number and biological mass of bacteria of the Irtysh River in the  
region of the Bukhtarma Reservoir (before its filling). Trudy  
Inst. mikrobiol. i virus. AN Kazakh. SSR 4:65-75 '61.

(IRTYSH RIVER—BACTERIOLOGY)

(MIRA 14:4)

GULAYA, N.K.

Distribution of bacteria in the Irtysh River during the spring flood period. Trudy Inst. mikrobiol. i virus. AN Kazakh. SSR 4:76-81 '61.  
(MIRA 14:4)

(IRTYSH RIVER—BACTERIOLOGY)

ILYALETDINOV, A.N.; GULAYA, N.K.

Phospate-mobilizing bacteria of the Irtysh River. Trudy Inst.  
mikrobiol. i virus. AN Kazakh. SSR 4:82-88 '61. (MIRA 14:4)  
(IRTYSH RIVER—BACTERIA, PHOSPHORUS)

GULAYA, N.K.; KANATCHINOVA, M.K.

Microflora and chemical composition of soils of the Ust'-Kamenogorsk Reservoir. Trudy Inst. mikrobiol. i virus. AN Kazakh. SSR 5:104-114 '61.

(MIRA 15:4)

(Ust'-Kamenogorsk Reservoir--Soil micro-organisms)  
(Soil chemistry)

GULAYA, N.M. [Gula, N.M.]

Effect of dehydroascorbic acid on the activity of the pancreatic lipase in cat. Ukr. biokhim. zhur. 34 no.3:424-427 '62.

(MIRA 18:5)

1. Kafedra biokhimii Kiyevskogo meditsinskogo instituta.

GULAYA, N.M. [Hula, N.M.]

Effect of dehydroascorbic acid on the rate of aconitase reaction.  
Ukr. biokhim. zhur. 36 no.5:705-710 '64.

(MIRA 18:6)

1. Kafedra biokhimii Kiyevskogo meditsinskogo instituta.

GULAYEV, Ye. A., Cand Med Sci -- (diss) "Problem of iron metabolism in donors." Kuybyshev, 1960. 16 pp; (Kuybyshev Medical Inst, Hospital Therapeutic Clinic, Kuybyshev Oblast' Blood Transfusion Station); 270 copies; price not given; (KL, 22-60, 143)

GULAYKIN, I. V. and YUDINTSEVA, E. V.

"Uptake of Strontium, Cesium and Some Other Fission Products by Plants and Their Accumulation in Crop Yield."

paper to be presented at the 2nd UN Intl.' Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sept 58.



NUTSUBIDZE, N.N.; GULBANI, D.I.

Anthocyanins of grape leaves. Soob. AN Gruz. SSR 23 no.6:671-676 D  
'59. (MIRA 13:6)

1. Laboratoriya biokhimi i Instituta botaniki AN Gruz. SSR, Tbilisi.  
Predstavleno akademikom S.V. Durmishidze.  
(Anthocyanins) (Grapes)

BELINOVICH, M.S., inzhener.; GUL'BE, L.E., inzhener.

Continuous work schedule in practice. Sbor.mat.o nov.tekh.v stroi.  
15 no.10:1-5 '53.

(MERA 6:12)  
(Building)

AID P - 318

Subject : USSR/Engineering

Card : 1/1

Authors : Gul'be, L. E. and Alekseyev, A. I., Engineers

Title : A simplified procedure for the automatic welding of pipes. (Practice of the Trust Uralstal'konstruktsiya)

Periodical : Sbor. mat. o nov. tekhn. v stroi., 3, 10-13, 1954

Abstract : A special travelling platform has been designed with roller stands on which large diameter pipes ( $\varnothing$  1.3 m - 1.9 m) can be placed and turned over for automatic welding. For this welding the universal welding tractor TS-17 was used. The construction of tractor TS-17 was designed by the Welding Institute of the Academy of Sciences, USSR, and the whole process of welding carried out by the Collective of Metallic Constructions of the Magnitogorsk Plant. 4 charts show the details of this installation.

Institution : None

Submitted : No date

AID P - 514

Subject : USSR/Engineering

Card 1/1 Pub. 93 - 1/12

Author : Gul'be, L. E., Eng.

Title : Results of the construction of residential houses in  
Izmaylovo by the continuous mass production speed method

Periodical : Sbor. mat. o nov. tekhn. v stroi., 6, 1-3, 1954

Abstract : This is a short report on the construction of eight  
5-story apartment houses built by Building Administration  
#181 of Trust #28 of the Ministry of Construction in 1953.

Institution : None

Submitted : No date

GUL'BE, L. B. inzhener.

Using a rolling form in building concrete structures.  
Sbor.mat. o nov.tekh. v stroi. 16 no.10:18-21 '54. (MIRA 8:2)  
(Concrete construction--Formwork)

GUL'BE, L.E., inzhener

Building construction yards for the manufacture of precast  
reinforced concrete structural elements and products. Sbor.  
mat. o nov. tekhn. v stroi. 17 no.7:12-15 '55. (MLRA 8:9)  
(Precast concrete)

GUL'BE, P., inzh.

M. Kvasov's automatic tool. Stroitel' no.7:20 JI '58. (MIRA 11:9)  
(Electric welding--Equipment and supplies)





GULBERT, Anna, dr.; POKA, Kalman, dr.

Atypical case of neglected melanoblastoma. *Borogy.vener.*  
szemle 36 no.1:31-32 Ja '60.

1. Országos Onkologiai Intezet (Igazgato: Dr. Vikol Janos;  
tudományos igazgato: Dr. Wald Bela, az orvostudományok kandidátusa)  
dermatologiai osztalyanak (Foorvos: Dr. Venkei Tibor: es a rackevei  
jaras Bor-nemibeieleggondozo Intezetenek (Vezető orvos: Dr. Poka  
Kalman) közleménye.

(MELANOMA case reports)

BIHARI, Odon, dr.; GULBERT, Anna, dr.; FENYES, Gyorgyne, dr.; SUGAR, Janos, dr.;  
VENKEI, Tibor, dr.

Role of the P32 concentration test in early diagnosis of malignant  
tumors of the skin. Magy. radiol. 14 no.4:227-228 J1 '62.

1. Orszagos Onkologia Intezet kozlemenye (Igazgato: Vikol Janos dr.).  
(PHOSPHORUS radioactive) (SKIN NEOPLASMS diag)

BIMARI, Odon, dr.; GULBERT, Anna, dr.; FENYES, Gyorgyne, dr.; SUGAR, Janos, dr.;  
VENKEI, Tibor, dr.

Role of the P32 concentration test in early diagnosis of malignant  
tumors of the skin. Magy. radiol. 14 no.4:227-228 J1 '62.

1. Orszagos Onkologia Intezet kozlomenye (Igazgato: Vikol Janos dr.).  
(PHOSPHORUS radioactive) (SKIN NEOPLASMS diag)

GUL'BIN, V.; POPOV, V.

Fighting for high productivity. Avt.dor. 28 no.8:4-5  
Ag '65. (MIRA 18:11)

GUL'BINAS A. A.

Sep/Oct 1960

USSR/Medicine - Skin, Tuberculosis  
and Tuberculids

Medicine - Tuberculosis, Therapy

"The Treatment of Cutis Tuberculosis With 'Neobenzinol,' a Preparation for Stimulation Therapy," I. Kayryukshtis, A. Gul'binas, Clinic of Faculty Therapy and Dermatovenereol Clinic, Vil'nyus State U, 2 pp

"Problemy Tuberkuleza" No 5

Prof. I. Kayryukshtis prepared "Neobenzinol," new preparation for stimulation therapy containing liquid hydrocarbons of the aliphatic series. It is produced by the "Sanitas" Chemicophar Factory in Kaunas, Lithuanian SSR. Presents data on results of its use. Concludes it is effective and safe remedy for cutis tuberculosis. Treatment is simple and can be administered to ambulatory and bedridden cases.

PA 21/L9T78

GUL'BINAS, A.A.

KAIRIUKSHIS I., GUL'BINAS A.,

Lechenie neobenzinolem skrofulodermy in tuberkulesnogo limfadenita.  
[Neobenzinol treatment of scrofuloderma and tuberculous lymphadenitis] Prob. tuberk., Moskva No. 2 Mar-Apr 51 p. 43-7.

1. Of the Clinic of Faculty Therapy (Head--Honored Worker in Science Lithuanian SSR Prof. I. Kairyukshtis) and of the Skin-Venereological Clinic (Head--Docent A. Gul'binas), Vil'nyus State University.

CLML Vol 20, No. 10 October 1951

GUL'BINAS, A.A., kand. med. nauk; AMITINA, E.B.

~~Dissecting~~ aneurysm of the aorta in tabes dorsalis. Vest. derm. i ven.  
33 no.2:78-79 Mr-Apr '59 (MIRA 12:7)

1. Iz kozno-venerologicheskogo dispansera (glavnyy vrach - kandidat  
med. nauk A.A. Gul'binas), g.Shauliyay Litovskoy SSR.

(TABES DORSALIS, compl.

dissecting aortic aneurysm (Rus))

(AORTIC ANEURYSM, compl.

dissecting aneurysm with tabes dorsalis (Rus))

GUL'BINAS, A.A., kand.med.nauk

Case of allergy in angiotrophin therapy. Klin.med. 39 no.1:  
138-139 Ja '61. (MIRA 14:1)

1. Iz Shyaul'yayskogo kozhno-venereologicheskogo dispansera,  
Litovskaya SSR (glavnyy vrach - kand.med.nauk A.A. Gul'binas).  
(ANGIOTROPHIN) (ALLERGY)



GUL'BINAS, A.A., kand.med.nauk

Treatment of deep trichophytosis with neobenzinol in combination  
with local therapeutic agents. Vest.derm.i ven. no.9:88-90 '61.

(MIRA 15:5)

1. Iz Shyaul'yayskogo gorodskogo kozhno-venerologicheskogo dispansera  
Litovskoy SSR (glavnyy vrach - kand.med.nauk A.A. Gul'binas).  
(RINGWORM) (HYDROCARBONS--THERAPEUTIC USE)

GULBINAS, A., med. m. kand.; AMITINA, E.

On the problem of panniculitis. Sveik. apsaug. 8 no.1:38-39  
Ja'63.

1. Siailiu m. Odos ir veneros ligu dispanseris.

\*

GUL'BINAS, A.S. [Gulbinas, A.]

Angular velocity and angular acceleration of the follower roller of a flat cam gear. Trudy AN Lit. SSR. Ser. B no. 1:185-192 '65. (MIRA 18:7)

1. Institut energetiki i elektrotekhniki AN Litovskoy SSR.

GUL'BINOVICH, Mikhail Ivanovich, преподаvatel'; MASHINSKIY, Lev Osipovich,  
kandidat biologicheskikh nauk; SUDACHKOV, Ye.Ye., redaktor;  
ALTUF'YEVA, A.M., redaktor izdatel'stva; KOMYASHINA, A.D.,  
tekhnicheskij redaktor

[Economics, organization, and planning of municipal landscaping]  
Ekonomika, organizatsiya i planirovaniye gorodskogo zelenogo stroitel'-  
stva. Moskva, Izd-vo M-va kommun.khoz. RSFSR, 1957. 263 p.

(MLHA 10:10)

1. Kafedra ekonomiki i organizatsii proizvodstva Moskovskogo lesotekhnicheskogo instituta (for Gul'binovich)  
(Landscape gardening)

GUL'BINOVICH, M. I.

FAYNBERG, A.I., kand.ekon.nauk; DOMBROVSKIY, A.A., kand.ekon.nauk;  
POPOV, N.S., kand.ekon.nauk; SKVORTSOVA, N.T., kand.ekon.nauk;  
STROGANOVA, T.A., kand.ekon.nauk. Prinimali uchastiye: BQLOTINA,  
O.A., kand.ekon.nauk; GUL'BINOVICH, M.I.. PROTSENKO, D.I., red.;  
SALAZKOV, N.P., tekhn.red.

[Economics, organisation, and planning of municipal services]  
Ekonomika, organizatsiia i planirovanie gorodskogo khoziaistva.  
Pod obshchei red. A.I.Fainberga. Moskva, Izd-vo M-va kommun.  
khov.RSFSR, 1959. 451 p. (MIRA 13:2)  
(Municipal services)

GUL'BINOVICH, Mikhail Ivanovich; BUKIN, F.T., red.; BAKHTIYANOVA,  
R.Kh., red. izd-va; LELYUKHIN, A.A., tekhn. red.

[Analyzing the economic and financial activity of landscape  
gardening enterprises of cities] Analiz khosiaistvenno-fi-  
nansovoi deiatel'nosti predpriatii gorodskogo zelenogo stroi-  
tel'stva. Moskva, Izd-vo M-va kommun. khoz. RSFSR, 1960. 142 p.  
(MIRA 13:9)

(Landscape gardening--Economic aspects)

GUL'BINOVICH, Mikhail Ivanovich. Prinimal uchastiye MASHINSKIY,  
L.O., kand. biolog. nauk; BUKIN, F.T., red.;  
BAKHTIYAROVA, R.Kh., red.izd-va; KHENOKH, F.M., tekhn. red.

[Economics, organization and planning of municipal park and  
horticultural services] Ekonomika, organizatsia i planirova-  
nie gorodskogo zelenogo khoziaistva i stroitel'stva. Moskva,  
Izd-vo M-va kommun.khoz. RSFSR, 1962. 275 p. (MIRA 16:5)  
(Landscape gardening) (Horticulture)

GULBINSKIENE, A.; CERNECKIS, V.; KEZINAITIS, P.; MEDONIS, A., red.;  
VYSOMIRSKIS, C., tekhn. red.

[Kaunas, its past, present and future] Kaunas, jo praetis,  
dabartis ir ateitis. Kaune, Valstybine politines ir mokslines  
literaturos leidykla, 1960. 143 p. (MIRA 15:3)  
(Kaunas—Description)



GULBINSKIENE, A.

Kaunas. Vilnius, Gos.izd-vo polit. i nauchn. lit-ry Litovskoi  
SSR, 1962. 172 p. (MIRA 16:3)  
(Kaunas)

GULBIS, M.G.; LATKOVSKA, S.A.

Xeroderma pigmentosum. Pediatriia 42 no.1:76-78 Ja'63.

(MIRA 16:10)

1. Iz kafedry detskikh bolezney (zav. M.D.Kurbatova) Rzh-  
skogo meditsinskogo instituta i Rzhskoy detskoy klinicheskoy  
bol'nitsy (glavnyy vrach T.R.Cherns)  
(SKIN--DISEASES) (CHILDREN--DISEASES)

DRIZINA, Tatjana; GULBIS, V., red.; BLAUA, V., tekhn. red.

[Wages for motor vehicle drivers in agriculture] Par  
soferu darba samaksu lauksaimnieciba. Riga, Latvijas  
Valsts izdevnieciba, 1963. 164 p. (MIRA 16:4)  
(Latvia--Wages--Transportation, Automotive)  
(Latvia--Agriculture)

BLIVIS, J., inzh.-mekhanik; GULBIS, V., inzh.-mekhanik; JULA, E.,  
red.; FREIMANIS, V., tekh. red.

[Tractors and motor vehicles] Traktori un automobili.  
Riga, Latvijas Valsts izdevnieciba, 1963. 540 p.  
(MIRA 16:4)

(Tractors) (Motor vehicles)

ULSKA, J.; GULBIS, V., red.

[Optimum depth and spacing of drains] Optimalais drenu  
dzilums and atstatums. Riga, Latvijas valsts izdevnieciba,  
1965. 48 p. [In Latvian] (MIRA 18:6)

GULBIS, Yu.M.

Arrangement allowing avoidance of flaring in Raschel fabrics.  
Obm. tekhn. opyt. [MLP] no.35:14 '56. (MIRA 11:12)  
(Knitting machines)

GULBIS, Yu.M.

Special lighting for Raschel machines. Obm. tekhn. opyt. [MLP]  
no.35:15 '56. (MIRA 11:12)  
(Knitting machines--Attachments)

GUL'CHAK, F. YA.

Reindeer

Problems concerning technical installations for reindeer farms in the fifth five-year plan, Sov.zootekh, 8, no. 2, 1953.

Monthly list of Russian Accessions, Library of Congress, June 1953. Unclassified.



Gul'chak, F. Ya.

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Severnoye olenevodstvo (Raising reindeer in the North) Moskva, Sel'khozgiz, 1954.  
215 p. tables.  
"Isopl'zovannaya Literatura": p. 207-(214)

GUL'CHAK, G.S., inzhener.

Automatic regulation of continuous refining of fats in column type  
apparatus. Masl.-zhir.prom.22 no.6:26-29 '56. (MLRA 9:10)  
(Oils and fats)

GUL'CHAK, G.S.; VERNER, E.O.; SYRKIN, G.Ye.; BUKHARIN, V.V., spetsred.;  
MURASHEVA, O.I., red.; KISINA, Ye.I., tekhn.red.

[Automatic control devices in the oils and fats industry] Avto-  
matische reguliruiushchie pribory v maslozhirovoi promyshlen-  
nosti. Moskva, Pishchepromizdat. Pt.2. 1957. 31 p. (MIRA 12:1)  
(Automatic control) (Oil industries--Equipment and supplies)

POLAND/Radio Physics - Radiation of Radio Waves. Transmission  
Lines and Antennae

I-4

Abs Jour : Ref Zhur - Fizika, No 1, 1959, No 1562

Author : Gulcz Grzegorz  
Inst : "  
Title : Spiral Antennas

Orig Pub : Rozpr. elektrotechn., 1958, 4, No 1, 103-166

Abstract : Survey article. Data are presented on the modes of the axial and normal (relative to the axis) radiation of cylindrical spiral antennas. Equations are given for the directivity patterns of both types of radiations.

Supply circuits for the individual spirals and systems of spirals radiating in the axial direction are considered, along with the influence of the earth on the shape of the directivity patterns of spirals for both types of radiation. Bibliography, 26 titles.

I.F. Dobrovol'skiy

Card : 1/1

POLAND/Chemical Technology. Chemical Products and Their  
Application. Part 3. - Drugs. Vitamins. Antibiotics.

H

Abs Jour: Referat. Zhurnal Khimiya, No 21, 1958, 71743.

Author : Jadwiga Gulczynska, Zdzislaw Pazola, Wladislaw  
Prominski, Antoni Swierczynski  
Inst : Research Institute and Laboratory of Industry,  
Agriculture and Their Products.  
Title : Preparation of Vitamin C Concentrate of "Oblepikha" Fruit.

Orig Pub: Prace inst. i lab. badawcz przem. roln. i spozywc.,  
1956, 6, No 3, 40-54.

Abstract: Vitamin C concentrates in the shape of a thick must containing 1820 mg % (sic!) of ascorbic acid (I) and of a concentrate with sugar containing 289.9 mg % (sic!) of I were obtained in the laboratory. The

Card : 1/3

GULCZYNSKI, J.

Parametric amplifier for the L-band. Przem inst telekom  
prace 14 no.45:75 '64.

1. Department of Radio Receiving Engineering, Technical  
University, Gdansk.

GULDA, O.

~~Effect of laparotomy on the activity of certain ganglioplegic drugs.~~  
Cesk. fysiол. 9 no.1:79 Ja 60.

1. Farmakologicky ustav fak. detak. lek. KU, Praha.  
(AUTONOMIC DRUGS, pharmacol.)  
(ABDOMEN, surg.)

SUBBT, F.: GULDA, O.

On the effect of hypolivate on the isolated mammalian heart.  
Cesk.fysiol. 9 no.3:303 My '60.

1. Farmakologicka laborator Chemickeho ustavu CSAV, Praha,  
Farmakologicka katedra fak.detsk.lek. KU, Praha.  
(HEART pharmacol)  
(ANTIHYPERTENSIVE AGENTS pharmacol)

GULDA, O.

CSSR

no academic degree indicated

Dept. of pharmacology and experimental pathology of the Faculty of Pediatrics at Charles University (katedra farmakologie a pokusne patologie fak. detskeho lekarstvi Karlovy University), Prague; director: Prof. H. RASKOVA, MD, ScD

Bratislava, Bratislavske Lekarske Listy, No 1, 1963, pp 34-39

"The Influence of Staphylococcus Toxin on the Effect of Convulsants and Thiopenthal"



GULDA, O.

Effect of staphylococcal toxins on the effect of convulsants and thiopental.  
Bratisl. lek. listy 63 no.1:34-40 '63.

1. Z katedry farmakologie a pokusne patologie fak. detskeho lek. KU  
v Praze, vedouci prof. MUDr. H. Raskova, Dr. Sc.  
(TOXINS AND ANTITOXINS) (STAPHYLOCOCCUS) (THIOPENTAL)  
(ANALEPTICS) (STRYCHININE) (PENTYLENETETRAZOLE)

CASENOVLOVKA

O. GULBA, Department of Pharmacology and Experimental Pathology of the Pediatric Faculty of Charles University (Ustav farmakologie a pokusne patologie fakulty detskeho lekarskeho UC [Karlova University]) Head (prednosta) Prof Br H. SASKOVA, DrSc; Prague. Present affiliation of author: Department of Pharmacology, Medical Faculty J.E. Purkyně University (Katedra farmakologie lekarske fakulty JEFU [Universita J. Ev. Purkyně]), Brno.

"Effect of Reserpine and Repeated Administration of Phenol on Lethal Dose of Staphylococcal (Wood 49) Toxin."

Prague, Časopis Lékařů Českých, Vol 102, No 7, 15 Feb 63; pp 176-179.

Abstract [English summary modified]: Neither 2 mg./Kg. reserpine i.v. 1 hour before, nor "catecholamine-depleting dose" of 5 mg./Kg. s.c. 36 hours before the toxin affected significantly the response to the latter, but 0.01% solution of phenol, 0.05 cc. s.c. for 12 days, then 3 days pause, then toxin, did decrease toxic effect. Speculation about mode of action: via histamine, or tissue enzyme sensitivity. Two graphs; 31 Western and 5 Czech references.

1/1

GULDA, O.

Effect of staphylococcal toxin (Wood 46) on motor nerves and on transmission of excitation from nerve to muscle. J. hyg. epidem., Praha 8 no.1:120-126 '64.

Effect of staphylococcal toxin (Wood 46) on excitability and transmission in the sympathetic ganglion. Ibid.:127-131

1. Department of Pharmacology and Experimental Pathology, Faculty of Pediatrics, Prague.

\*

CZECHOSLOVAKIA

GULDA, O.; HADASOVA, E.; Chair of Pharmacology, Medical Faculty  
(Farmakologicka Katedra Lek. Fak. ), Brno.

"Pharmacodynamics of the Staphylococcic Toxin."

Prague, Ceskoslovenska Fysiologie, Vol 15, No 5, Sep 66, p 402

Abstract: The spastic effect of the staphylotoxin can be suppressed by some materials that have no spasmolytic properties; this spasm-suppressing effect is inhibited by calcium. Chlorpromazine and LSD relax the spasm caused by staphylotoxin, and their effect is inhibited by Ca. The drug Syntofyl has an inhibitive and relaxing effect on the spasm. The inhibitive effect is removed by Ca, but the relaxing effect persists. Ba and Sr have an effect similar to that of Ca; Mg does not act in the same way. On the contrary it inhibits the spasm in normal de Jalon's solution. Its inhibitive effect is removed by the presence of Ca. 2 Western, 1 Czech reference. Submitted at 14 Days of Pharmacology at Smolenice, 16 Feb 66.

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ACC NR: AP6032377

1. 00000-67 RS/JK

SOURCE CODE: CZ/0053/66/015/005/0402/0402

AUTHOR: Gulda, O. ; Hadasova, E. 24

ORG: Chair of Pharmacology, Faculty of Medicine, Brno (Farmakologicka katedra lek. fak.)

TITLE: Pharmacological dynamics of staphylococcus toxin<sup>b</sup> Part I [Presented at the 14th Pharmacological Meeting in Smolenice 16 Feb. 1966]

SOURCE: Ceskoslovenska fysiologie, v. 15, no. 5, 1966, '402

TOPIC TAGS: toxicology, pharmacology, physiology, biochemistry, staphylococcus toxin

ABSTRACT: Previous investigations have confirmed the ability of certain compounds to counteract the spasmodic effect of staphylococcus toxin. The anti-spasmodic and relaxant properties of such compounds may be inhibited by calcium. Recently these antispasmodic properties and the effect of calcium upon them were studied in chlorpromazine, LSD<sup>b</sup> synthetic phylline, magnesium, nitrogen, NaCN, and DNP. The inhibiting and relaxant effects of chlorpromazine and LSD were suppressed by an increase of calcium in the nutrient solution. The inhibiting effect of synthetic phylline could be controlled both with calcium and with washing; how-

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ACC NR: AP6032377

ever, calcium did not change its relaxant effect. In these tests calcium could be replaced with barium and strontium, but not with magnesium. Spastic reaction to the staphylococcus toxin was observed in isolated smooth uterine muscle under conditions of anoxia and metabolic inhibition. It was shown that NaCN and DNP suppressed the onset of spasms; after flushing out NaCN, the spasms developed, while spasms did not develop after flushing out DNP. [WA-50]

SUB CODE: 06/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 002/

CZECHOSLOVAKIA

CZ/0053/66/015/005/0402/0402

AUTHOR: Gulda, O.; Hadasova, E.

ORG: Chair of Pharmacology, Faculty of Medicine, Brno (Farmakologicka katedra lek. fak.)

TITLE: Pharmacological dynamics of staphylococcus toxin Part I [Presented at the 14th Pharmacological Meeting in Smolenice 16 Feb. 1966]

SOURCE: Ceskoslovenska fysiologie, v. 15, no. 5, 1966, 402

TOPIC TAGS: toxicology, pharmacology, physiology, biochemistry, staphylococcus toxin

ABSTRACT: Previous investigations have confirmed the ability of certain compounds to counteract the spasmodic effect of staphylococcus toxin. The anti-spasmodic and relaxant properties of such compounds may be inhibited by calcium. Recently these antispasmodic properties and the effect of calcium upon them were studied in chlorpromazine, LSD, synthetic phylline, magnesium, nitrogen, NaCN, and DNP. The inhibiting and relaxant effects of chlorpromazine and LSD were suppressed by an increase of calcium in the nutrient solution. The inhibiting effect

CZECHOSLOVAKIA

CZ/0053/66/015/005/0403/0403

AUTHOR: Hadasova, E.; Gulda, O.

ORG: Chair of Pharmacology, Faculty of Medicine, Brno (Farmakologicka katedra lek. fak.)

TITLE: Pharmacological dynamics of staphylococcus toxin. Part II [Presented at the 14th Pharmacological Meeting in Smolenice 16 Feb. 1966]

SOURCE: Ceskoslovenska fysiologie, v. 15, no. 5, 1966, 403

TOPIC TAGS: toxicology, pharmacology, physiology, biochemistry

ABSTRACT: Dolsin, synthetic phylline, and hydrocortisone, administered before staphylococcus toxin, suppressed typical toxin spasms in tests with a rabbit's aorta. However, magnesium, heparine, phlegomasin, and LSD had no effect on the onset of spasms. The histamine-liberating effect of staphylotoxin was tested as well. In a test tissue where calcium had been removed with EDTA, the toxin released statistically significant, lower amounts of histamine when tested in calcium-free solution. When a calcium solution was used, markedly higher

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AUTHORS:

Guldashvili, A. I., Dmitriyev, P. P. SOV/89-5-6-18/25  
Krasnov, N. N., Mishin, V. Ya.,  
Khaprov, Ye. N.

TITLE:

The Production of the Isotope  $As^{74}$  by Means of a Cyclotron  
(Polucheniye izotopa  $As^{74}$  na tsiklotrone)

PERIODICAL:

Atomnaya energiya, 1958, Vol 5, Nr 6, pp 660 - 661 (USSR)

ABSTRACT:

$As^{74}$  was obtained by the irradiation of metallic germanium with the external 10,8 MeV deuteron beam of the cyclotron (Ref 5).  
The characteristic feature of the target was the fact that the cooling water immediately reached the inner surface of the irradiated germanium plate. The germanium plate was cast in a vacuum and was then ground to the dimensions  $170.40.4 \text{ mm}^3$ . The deuteron beam ( $60-70 \mu A$ ) is limited by a shutter so that only a surface of  $150.25 \text{ mm}^2$  of the germanium was irradiated. The water consumption was 5 l/m.  
Chemical separation was carried out as follows: After the irradiated sample had been boiled twice (for 15 to 20 minutes) in aqua regis, about 97-98 % of the activity had dissolved.

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The Production of the Isotope  $As^{74}$  by Means of  
a Cyclotron

SOV/89-5-6-18/25

The solution was steamed-in and extracted with 11 n HCl (method according to reference 6). The arsenic carrier used weighed 50  $\mu$ g. Concentration of the arsenic isotope was carried out by the Marsh method (arsenic hydride). The two preparations, which were enclosed in an ampoule of 0,6  $cm^3$ , had an initial activity of 60 mC. The  $As^{74}$  activity was measured by comparison with a  $Co^{60}$  source by means of the micro-roentgenometer of the type "Kaktus" 30 days after irradiation. The total yield obtained by the formation of  $As^{74}$  was:

25  $\mu$ C/ $\mu$ A.hr  $\pm$  15 %. The half time was:  $T_{1/2} = 18,4 \pm 0,4$  d.

Professor B. S. Dzhelepov, I. P. Selinov, and Ye. Ye. Baroni interested themselves in this work. M. Z. Maksimov calculated the yield curve. Yu. A. Bliodze and I. I. Zhivotovskiy assisted in carrying out experiments. There are 2 figures and 10 references, 3 of which are Soviet.

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The Production of the Isotope As<sup>74</sup> by Means of  
a Cyclotron

SOV/89-5-6-18/25

SUBMITTED: September 13, 1958

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S/048/60/024/008/009/017  
B012/B067

29.6.00

AUTHORS: Chkuaseli, D. V., Nikoleyshvili, U. D., Guldamashvili, A. I.

TITLE: Resonance Charge Exchange of Positive Ions of the Alkali  
Metals

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960,  
Vol. 24, No. 8, pp. 970-974

TEXT: For measuring the cross sections of resonance charge exchange in singly ionized alkali metal ions the authors developed a method which differs from those employed earlier (Refs. 3,4,5). The difference consists in using the molecular beam of the substance concerned as target instead of the collision chamber with the gas investigated. This method allowed sufficiently exact absolute measurements. The experimental arrangement and the experiments are described. They were made in a small electromagnetic separator (Ref. 6). The cross sections of resonance charge exchange of positive singly ionized ions of  $K^+$ ,  $Cs^+$  and  $Rb^+$  were measured. Fig. 1 schematically shows the chamber of the arrangement with

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Resonance Charge Exchange of Positive Ions  
of the Alkali Metals

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the ion source and the receiving measuring device, Fig. 2 shows the double beam source of molecules with the monitor. For determining the dimensions of the receiving measurement device the traces of the trajectories of the following beams were recorded: the molecular, the ion beam, and the beam of the charge exchanging fast atoms (in the case of resonance charge exchange of magnesium) (Fig. 4). Fig. 4 shows that the dispersion of the charged and charge exchanging fast atoms is completely sufficient in the detection range (60 mm) to capture them separately. Hence, the method employed here allows a determination of the charge exchange by recording the fast neutral atoms and also by the potential method. In the present paper the measurement was made according to the potential method (Refs. 2,3,4,5). The experiments showed that the formation of slow ions and electrons in the interaction of fast singly ionized ions with gas atoms is mainly due to ionization and charge exchange processes. Fig. 6 shows the measurement results for cesium, rubidium, and potassium in the energy range of the primary ions from 5 to 30 kev. The same Fig. also shows the theoretical curves obtained from calculations made by O. B. Firsov, whereas the curves obtained from the

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Resonance Charge Exchange of Positive Ions  
of the Alkali Metals

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formula by Yu. N. Demkov are not given. Fig. 6 shows that the cross section of resonance charge exchange monotonically decreases with increasing primary ion velocity. The cross section is also reduced in the transition to atoms with a higher ionization potential. The experimental data of the cross sections of resonance charge exchange are on the average by 1,5 times higher than the theoretical values. There are 6 figures and 8 references: 6 Soviet and 2 British.

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S/057/60/030/007/018/018/XX  
B006/B064

26.2340

AUTHORS: Chkuaseli, D. V., Nikoleyshvili, U. D., Guldamashvili, A.I.

TITLE: Resonance Charge Exchange of Positive Potassium Ions

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol. 30, No. 7,  
pp. 817 - 823

TEXT: The authors measured the resonance charge exchange cross section of  $K^+$  ions on potassium atoms in the energy range of from 5 to 30 kev with an arrangement already described in Ref.7. Similar measurements were carried out by R. M. Kushnir, Yu. F. Bydin, and A. M. Bukhteyev (Refs. 5,6) at energies of  $< 2$  kev. The method employed differs from the usual one based on the use of a gas target; instead of the latter, an atom beam with controlled intensity was used. The sources that supplied the atom- and ion beam respectively, were constructed for the purpose (Fig.2 - ion source, Fig.5 - atom source) and arranged in a device shown in Fig.1 in such a manner that the two beams intersected; the ion beam is semicircularly deflected in the device. Fig.7 shows a photograph of the beam trajectory together with the atom beam source; the beam of the

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Resonance Charge Exchange of Positive  
Potassium IonsS/057/60/030/007/018/018/XX  
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recharged fast atoms which through the intersection point of the two beams goes tangentially to the ion beam, is clearly visible. Fig.6 shows the dependence of the intensity of the main atom beam on the monitor current, Fig.9 the dependence of the measured charge exchange cross section on the velocity of the primary ions. Measurement was made by the so-called potential method (Refs. 10-12), the results being accurate to within  $\pm 15\%$ . Fig.9 shows besides the experimental results also the  $\sigma(v)$  curves, calculated by a formula of O. B. Firsov (Ref.3) and Yu. N. Demkov (Ref.4). The theoretical curves lie somewhat lower and are less inclined; in all cases, however, the cross section  $\sigma$  decreases with rising ion velocity  $v$ ; in general, the experimental values are 1.5 times higher than the theoretical ones. In conclusion, the authors thank P. M. Morozov, Doctor of Physical and Mathematical Sciences for his interest in the work, A. L. Sokolova and N. G. Tsikiriy for carrying out the chemical analyses. There are 9 figures and 15 references: 10 Soviet, 2 German, 1 British, and 2 US.

SUBMITTED: January 5, 1960

Card 2/2



CHKUASELI, D.V.; GULDAMASHVILI, A.I.; NIKOLEYSHVILI, U.D.

Charge exchange between atoms and ions of alkaline and alkaline  
earth elements. Izv. AN SSSR. Ser. fiz. 27 no.8:999-1004 Ag  
'63. (MIRA 16:10)

1. Fiziko-tekhnicheskiy institut AN GruzSSR.

GULDAMASHVILI, A. I., NIKOLEYSHVILI, U. D., CHKUASELI, D. V.,

"Charge-exchange of Atoms and Ions of Alkaline and Alkali-Earth Elements,"

report presented at the 6th Intl. Conf. on Ionization Phenomena in Gases,  
Paris, France, 8-13 Jul 63

GULDAN, Arnost, inz.

Miniaturization and microminiaturization of electronic  
equipment. Sdel tech ll no.3:86-89 Mr '63.

GUDAN, almost, in2.

Now a solid state circuit is prepared. Sdel tech 12 no.5:  
187-138 My '64.

SZUCS, Miklos, dr., a kémiai tudományok kandidátusa; SZASZ Frigyes;  
BUNYITAI, Janos, dr.; BANAS Jozsef; ZACHEMSZKY, Ferenc;  
GULDEN, Otto; TERNYAK, Beno; BENKOVIC, Jozsef; DIOSZEGHY,  
Daniel, prof., dr.; TOTH, Istvan.

Questions of vocational education pertaining to the gas industry. Energia es atom 17 no.187-11 Ja'64.

1. Fovarosi Gazmuvek (for Szucs); 2. Orszagos Koolaj- es  
Gazipari Troszt (for Szasz and Bunyitai). 3. Miskolci Ne-  
hezipari Muszaki Egyetem (for Dioszeghy). 4. Veszpremi  
Vegyipari Muszaki Egyetem (for Toth).

KARTASHOV, I.N., inzh.; GULIDA, E.N., inzh.

Vibration of a gear-milling machine set up on a foundation without fastening. Mashinostroenie no. 2:69-70 Mr-Ap '64.  
(MIRA 17:5)

8(0)

SOV/112-59-3-4318

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 3, p 7 (USSR)

**AUTHOR:** Gul'denbal'k, A. P.

**TITLE:** Analogy Between the Descriptions of Processes in Some Inductively Coupled Circuits and Those in a Circuit with Series-Connected rLC  
(Analogiya v opisanii protsessov nekotorykh induktivno svyazannykh tsepey i tsepi s posledovatel'nym soyedineniyem rLC)

**PERIODICAL:** Nauchno-tekhn. inform. byul. Leningr. politekhn. in-t, 1957, Nr 11, pp 34-43

**ABSTRACT:** An analogy between the equations of some simple inductively coupled circuits and those of a series-connected rLC circuit is presented. A method is indicated for setting up the current equations in some branches of inductively-coupled circuits on the basis of a known current equation in the rLC circuit.

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SOV/144-59-5-4/14

AUTHOR: Gul'denbal'k, A.P., Assistant

TITLE: Application of the Hall Effect in the Study of Electro-Magnetic Processes in Electric Circuits

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektro-mekhanika, 1959, Nr 5, pp 24 - 37 (USSR)

ABSTRACT: It is shown that the Hall effect may be used to measure non-uniform magnetic fields. An analysis of eddy currents in Hall probes is carried out. Formulae are obtained which may be used in the design of Hall probes in which eddy currents are taken into account. Relations are obtained between the frequency and the maximum magnetic induction on the one hand, and the dimensions and the specific electrical conductivity of the substance of the material of the probe on the other. It is shown that germanium is the most suitable substance for Hall probes working in high frequency magnetic fields. The author's main interests lie in the capacitor discharge welding

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SOV/144-59-5-4/14

Application of the Hall Effect in the Study of Electromagnetic Processes in Electric Circuits

transformers.. It is shown that HgSe Hall probes are suitable for studying the magnetic flux in capacitor discharge welding transformers as a function of time. The magnetic flux was studied by inserting the Hall probe into a gap in the transformer core as shown in Figure 9. Thin film probes were found to be the most suitable. O. D. Yelpat'yevskaya, M.P. Zaytsev, L.R. Herman and I.A. Zaytsev are thanked for their assistance. There are 17 figures, 2 tables and 21 references of which 1 is German, 4 are English and the rest Soviet.

ASSOCIATION: Kafedra teoreticheskoy i obshchey elektrotekhniki, Leningradskiy politekhnicheskiy institut (Chair of Theoretical and General Electrical Engineering, Leningrad Polytechnical Institute)

SUBMITTED: March 21st, 1959.

\*IP AN SSSR (IP, AS USSR)

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\*\*VNIESO

AKSEL'ROD, Feliks Aronovich; GUL'DENBAL'K, Aleksey Pavlovich;  
ZAYTSEV, Mikhail Pavlovich; YURINOV, V.M., nauchnyy red.;  
BONDAROVSKAYA, G.V., red.; PERSON, M.N., tekhn. red.

[Fundamentals of electrical engineering and electronics; a  
manual for electric welders] Osnovy elektrotekhniki i elektro-  
niki; dlia elektrosvarshchikov. Moskva, Vses. uchebno-  
pedagog. izd-vo Proftekhizdat, 1961. 183 p. (MIRA 15:2)

(Electric engineering) (Electronics)  
(Electric welding--Handbooks, manuals, etc.)

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S/125/61/000/005/006/016

A161/A127

**AUTHORS:** Gul'denbal'k, A. P., Zaytsev, M. P.

**TITLE:** A ferromagnetic converter with a Hall pickup for measurements of secondary currents in resistance welding

**PERIODICAL:** Avtomaticheskaya svarka, no. 5, 1961, 49 - 54

**TEXT:** The authors give a description of a ferromagnetic converter with a Hall pickup. It presents an improved version of a PTC-1 (RTS-1) welding current recorder [Ref. 4: M. P. Zaytsev, I. A. Rozov, Registratsiya svarochnogo toka s ispol'zovaniyem effekta Kholla (Recording welding current using the Hall effect), VINITI, 1959] that had been developed using data of studies carried out at VNIIESO [Ref. 2: M. P. Zaytsev, I. A. Rozov, "Vestnik elektropromyshlennosti", no. 5, 1958]. The Hall pickup in the RTS-1 had the shape of a sonde that has to be placed close to the conducting element of the secondary circuit of the welding machine. The outer magnetic fields caused errors and difficulties, and the sonde-pickups could only be used for recording currents beginning with 4,000 amp. The new design is combined with a special ferromagnetic converter. It permits the measurement of secondary currents regardless of the effect of magnetic materials and outer magnetic

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A ferromagnetic converter with a Hall pickup for...

fields. The converter is a ring core made of band or sheet metal with a high magnetic inductivity and provided with one or several air gaps. The converter amplifies the signal from the pickup by about 20 times, which permits oscillograph records of secondary currents with maximum  $\leq 4,000$  amp in the pulse. It is stated that pickups of indium arsenide have lower temperature sensitivity than pickups of other materials (0.02 - 0.08% per  $1^{\circ}\text{C}$ ), and that the pickup core can have one air gap only if the main purpose is to amplify the signal whereas the effect of magnetic materials and changes in the secondary circuit are excluded. Otherwise the pickups must be provided with several gaps, as described by F. Kunrt, K. Maaz [Ref. 8; Messung hoher Gleichströme mit Hallgeneratoren, ETZ-A, vol. 76, no. 14, 487, 1956]. The article includes the calculation of the system. Results of some experiment measurements with the converter are given. There are 8 figures and 8 references: 7 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Leningradskiy politekhnicheskij institut im. M. I. Kalinina (Leningrad Polytechnic Institute im. M. I. Kalinin) (A. P. Gul'denbal'k); VNIIESO (M. P. Zaytsev)

SUBMITTED: December 14, 1960

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